



# **Massachusetts Department of Public Health Bureau of Infectious Disease and Laboratory Sciences**

## **2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report**

### **Suggested citation:**

Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences. 2015 Integrated HIV/AIDS, STD and Viral Hepatitis Surveillance Report, <http://www.mass.gov/eohhs/docs/dph/cdc/aids/std-surveillance-2015.pdf> Published December 2016. Accessed [date].

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# 2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report

Massachusetts Department of Public Health  
Bureau of Infectious Disease and Laboratory Sciences

December 2016

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# 2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report

## Massachusetts Department of Public Health

### Executive Summary 2015

The annual publication of the Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report provides data on the diseases reported to the Bureau of Infectious Disease and Laboratory Sciences by healthcare providers and laboratories per regulation (105 CMR 300.000). This report focuses on a subset of these diseases:

- Chlamydia
- Gonorrhea
- Hepatitis B
- Hepatitis C
- HIV/AIDS
- Syphilis

The intended audience for this annual surveillance report includes the clinicians and the laboratory professionals who report cases, as well as the community organizations, local public health departments, advocates, policymakers, and researchers who are interested in the health of Massachusetts residents.

### Key highlights in 2015

Chlamydia, gonorrhea, and syphilis:

- Chlamydia continues to be the most commonly reported infectious disease, with approximately 24,000 cases reported annually since 2012.
- Gonorrhea is now clearly disproportionately reported in men among whom rates have doubled over the last decade.
- The incidence rate of infectious syphilis (primary, secondary, and early latent syphilis) has increased 31% to a ten year high of 11.7 per 100,000 in 2015. Syphilis continues to disproportionately affect men, reflecting the ongoing syphilis epidemic in men who have sex with men.
- Young adults have the highest rates of chlamydia, gonorrhea, and syphilis, compared to other age groups.

HIV/AIDS:<sup>1</sup>

- The number of HIV infection diagnoses decreased by 31% from 2005 (N=913) to 2014 (N=629). Due to improved survival and lower rates of death, the number of persons known to be living with HIV/AIDS in Massachusetts increased 26% between 2005 (N=15,666) and 2014 (N=19,747).
- Black (non-Hispanic) and Hispanic/Latino residents had significantly higher rates of HIV infection diagnoses compared to white (non-Hispanic) residents. This was most notable in women, as 78% of women newly diagnosed between 2012 and 2014 were black (non-Hispanic) or Hispanic/Latina.

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<sup>1</sup> Due to the extensive follow up required to verify date of diagnosis, all HIV/AIDS data reflect HIV infection diagnosed through 2014.

## **2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report Massachusetts Department of Public Health**

- Male-to-male sex remained the single most frequently reported exposure mode among newly diagnosed cases of HIV infection, and represented 61% of newly diagnosed cases among men during 2012 to 2014.

### Hepatitis B and C:

- Reported confirmed cases of chronic hepatitis B continued to decline, due in large part to near-universal immunization of children in the United States.
- An average of over 8,500 confirmed and probable hepatitis C cases were reported in each of the past nine years (2007 to 2015).
- There continued to be an increase of hepatitis C cases reported among adolescents and young adults, reflecting ongoing transmission among young people injecting opioids.

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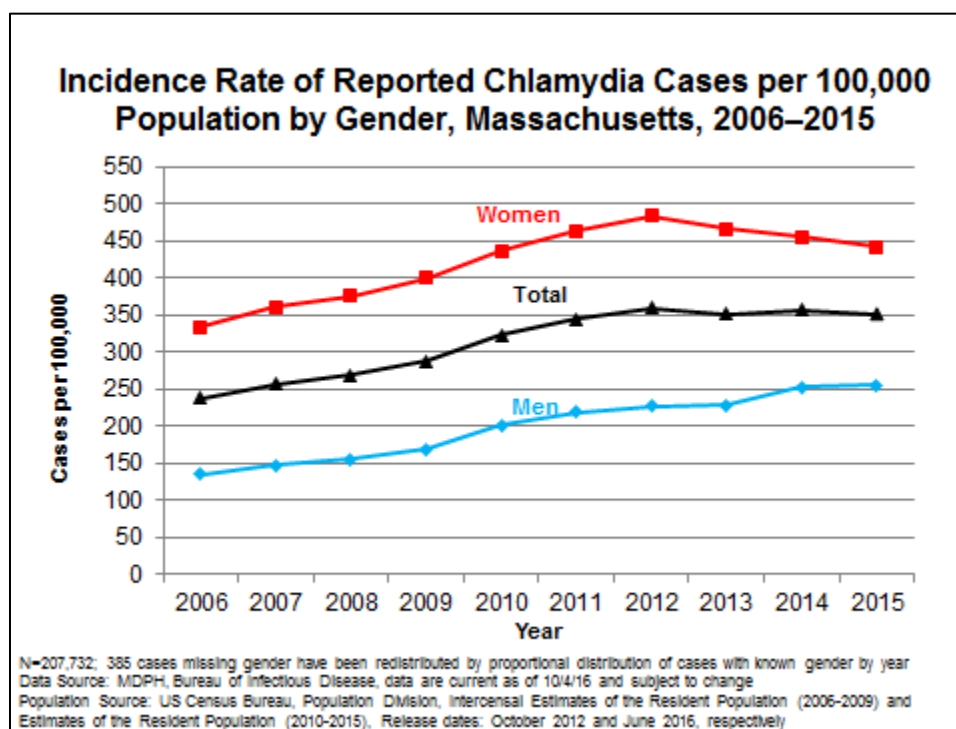
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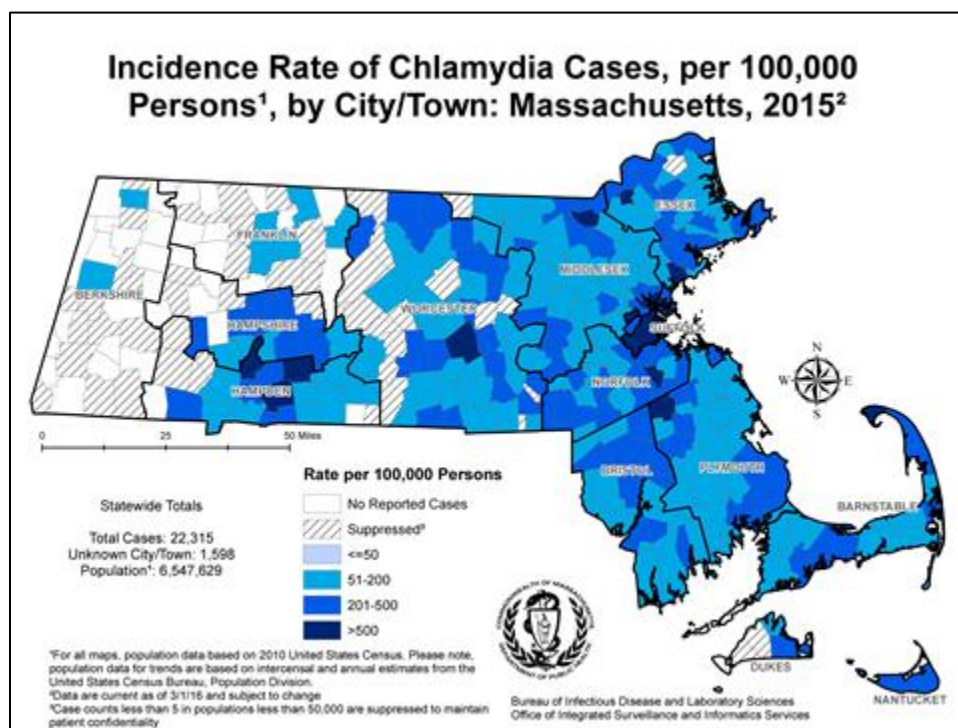
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### CHLAMYDIA



- 23,913 cases of chlamydia were reported in Massachusetts in 2015 - making it the most frequently reported infection in the Commonwealth.
- The total number of reported chlamydia cases increased by 57% from 15,268 in 2006 to 23,913 in 2015.
- In 2015, the chlamydia incidence rate among women (442.9 per 100,000) was nearly twice as high as the rate among men (255.5 per 100,000).

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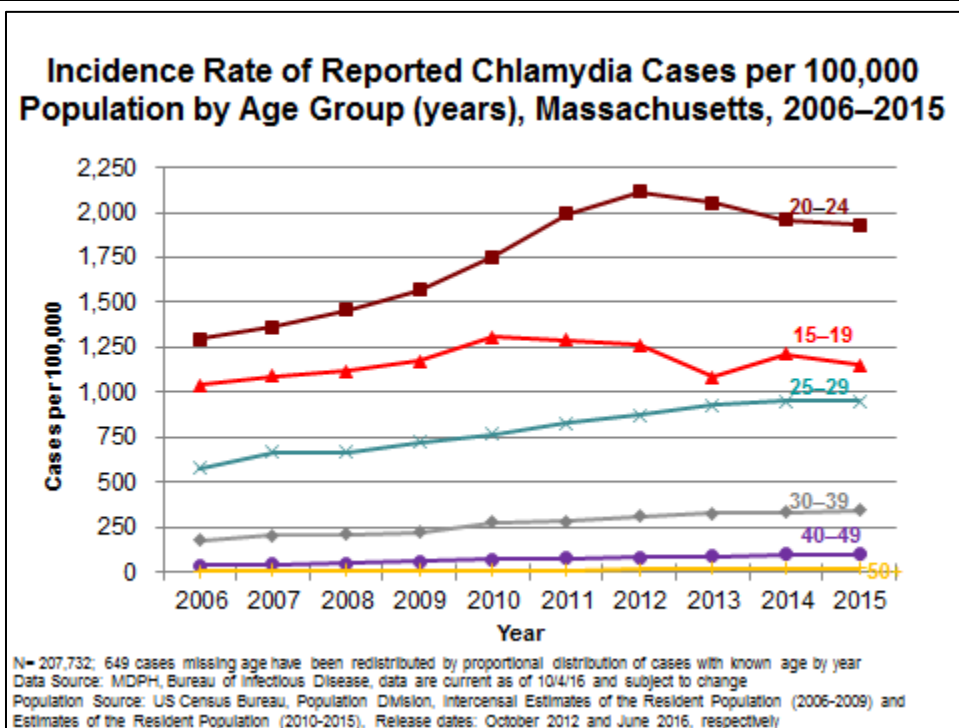
- The five jurisdictions with the highest chlamydia incidence rates were Provincetown, Lawrence, Springfield, Boston, and Brockton.
- In 2015, the statewide chlamydia incidence rate of 352.0 per 100,000 population was lower than the national rate of 478.8 per 100,000.<sup>2</sup>
- Massachusetts ranked ninth lowest in chlamydia incidence among the 50 states.<sup>2</sup>

<sup>2</sup> Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2015. Atlanta: U.S. Department of Health and Human Services; 2016

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## Massachusetts Department of Public Health

### CHLAMYDIA



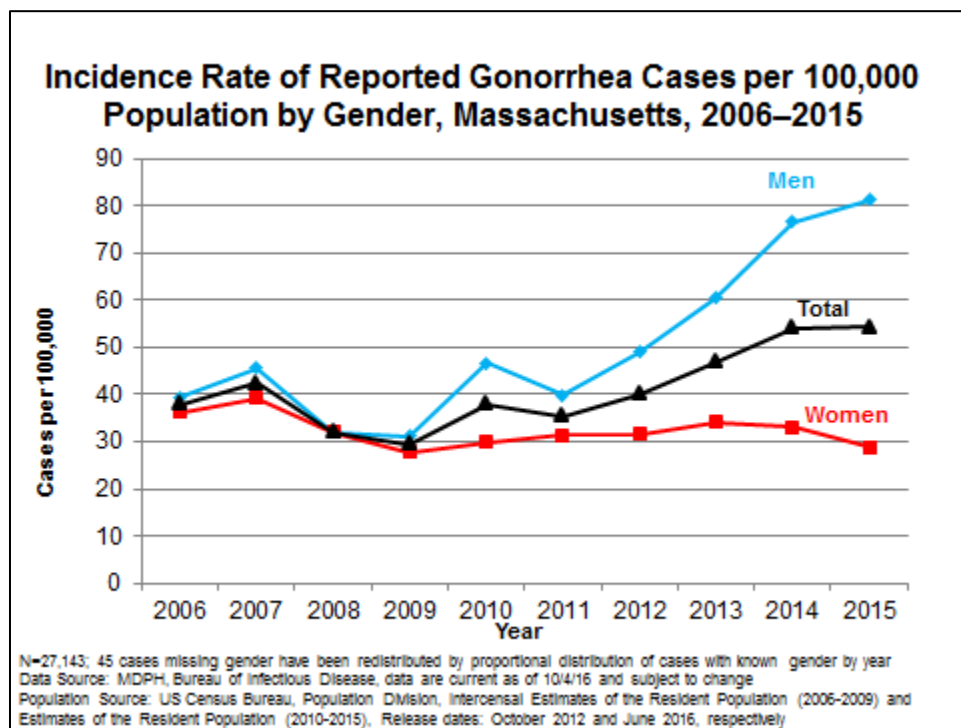
- The chlamydia incidence rate remained highest among adolescents and young adults.
- In 2015, the chlamydia incidence rate among young adults (ages 20–24) was nearly six times higher than the statewide rate in all ages (1,933.0 compared to 352.0 per 100,000).
- The rate among adolescents (ages 15–19) was over three times higher than the statewide rate in all ages (1,150.1 compared to 352.0 per 100,000).

Additional information about chlamydia and other STDs is available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

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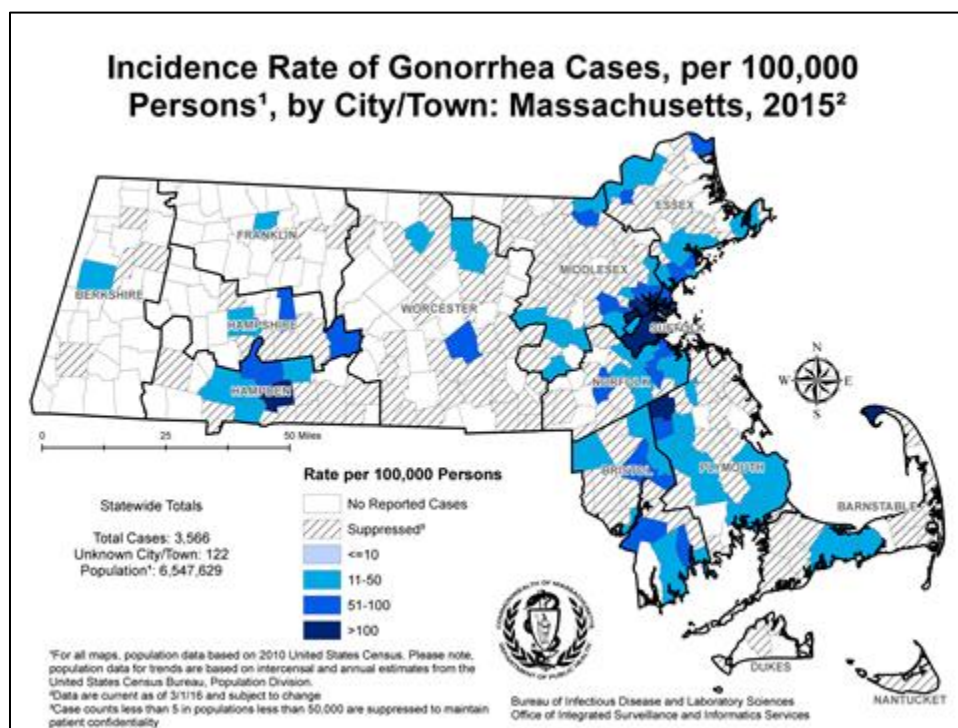
### GONORRHEA



- 3,688 gonorrhea cases were reported in 2015.
- The total number of reported gonorrhea cases increased by 52% from 2,428 in 2006 to 3,688 in 2015.
- Between 2006 and 2015, the gonorrhea incidence rate reported among men doubled (from 39.5 per 100,000 to 81.3 per 100,000). The gonorrhea incidence rate among men is now nearly three times higher than the rate among women (28.8 per 100,000).



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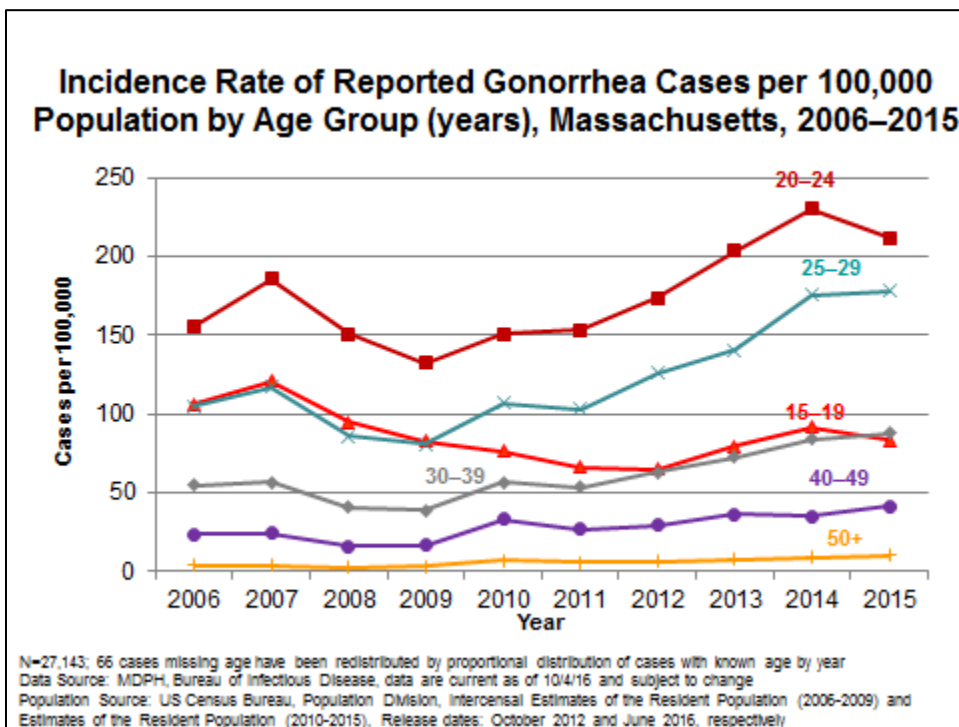
- Incident gonorrhea was clustered in urban areas in 2015.
- The five cities with the highest rates were Provincetown, Boston, Brockton, Cambridge, and Somerville.
- The statewide incidence rate of 54.3 per 100,000 was about half the national rate of 123.9 per 100,000.<sup>2</sup>
- Massachusetts ranked ninth lowest in gonorrhea incidence rate among the 50 states.<sup>2</sup>

<sup>2</sup> Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2015. Atlanta: U.S. Department of Health and Human Services; 2016

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### GONORRHEA

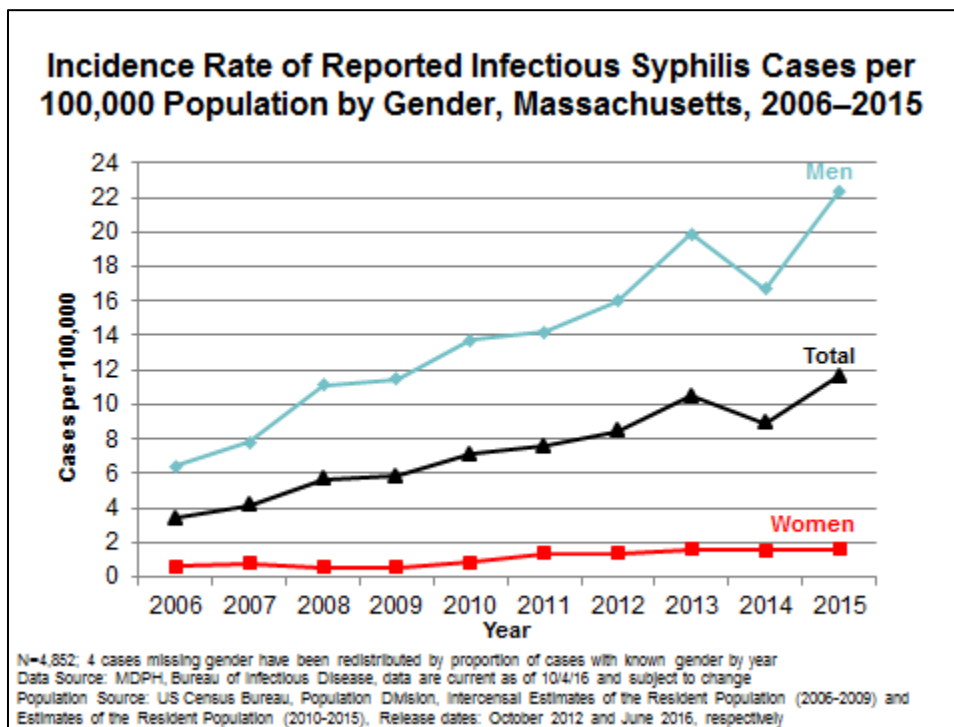


- The gonorrhea incidence rate remained highest among young adults.
- In 2015, the gonorrhea incidence rate among young adults (ages 20–24) was four times the statewide incidence rate in all ages (211.9 compared to 54.3 per 100,000).
- The rate among young adults (ages 25–29) was three times higher than the statewide rate in all ages (178.2 compared to 54.3 per 100,000).

Additional information about gonorrhea and other STDs is available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

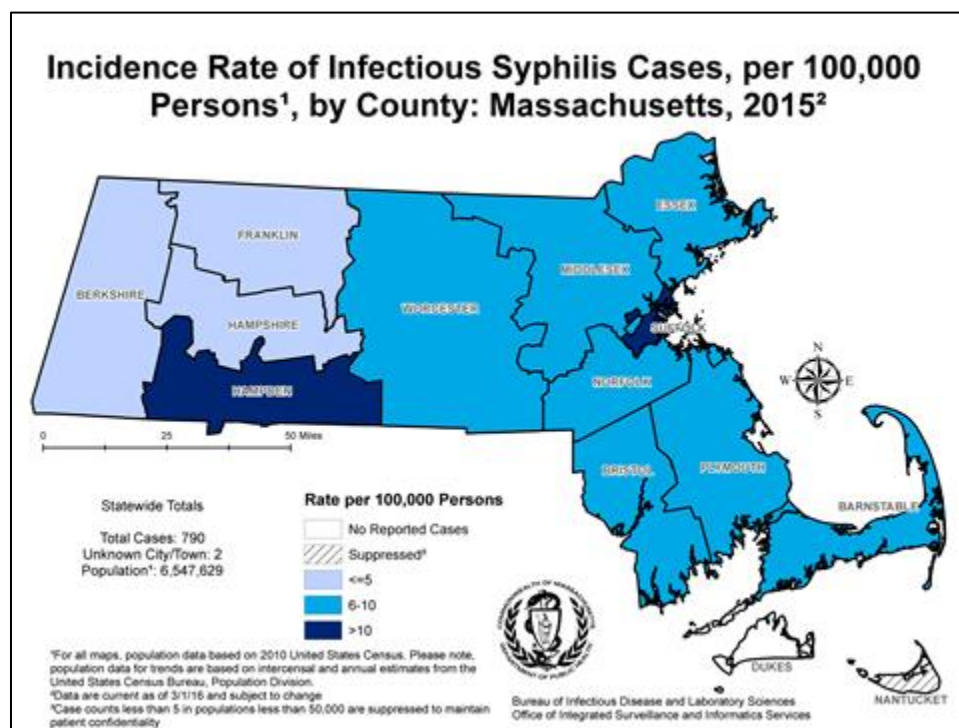
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### SYPHILIS



- 792 infectious syphilis (primary, secondary, and early latent) cases were reported in 2015.
- The total number of reported infectious syphilis cases in 2015 (N=792) was nearly four times the number reported in 2006 (N=219).
- Between 2006 and 2015, the syphilis incidence rate reported among men more than tripled (from 6.4 to 22.4 per 100,000). The syphilis incidence rate among men is now 14 times higher than the rate among women (1.6 per 100,000).

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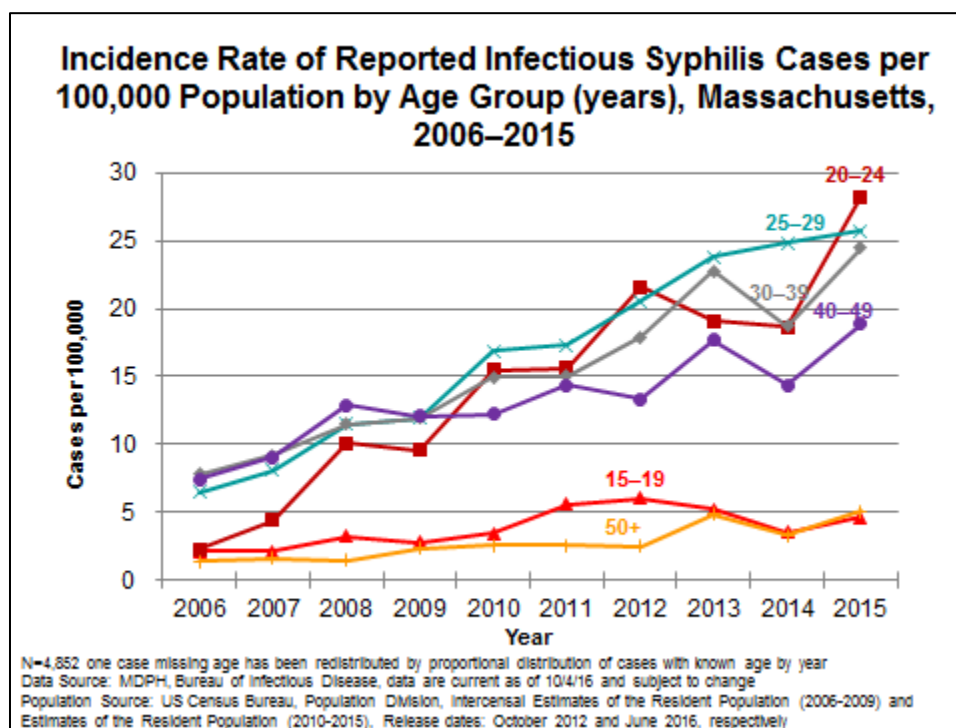


- The highest syphilis incidence rates were in Suffolk (40.0 per 100,000) and Hampden (17.0 per 100,000) counties.
- The statewide infectious syphilis incidence rate increased from 3.4 per 100,000 in 2006 to a ten-year high of 11.7 per 100,000 in 2015. Massachusetts ranked 17th in primary and secondary syphilis incidence rate among the 50 states.<sup>2</sup>

<sup>2</sup> Centers for Disease Control and Prevention. Sexually Transmitted Disease Surveillance 2015. Atlanta: U.S. Department of Health and Human Services; 2016

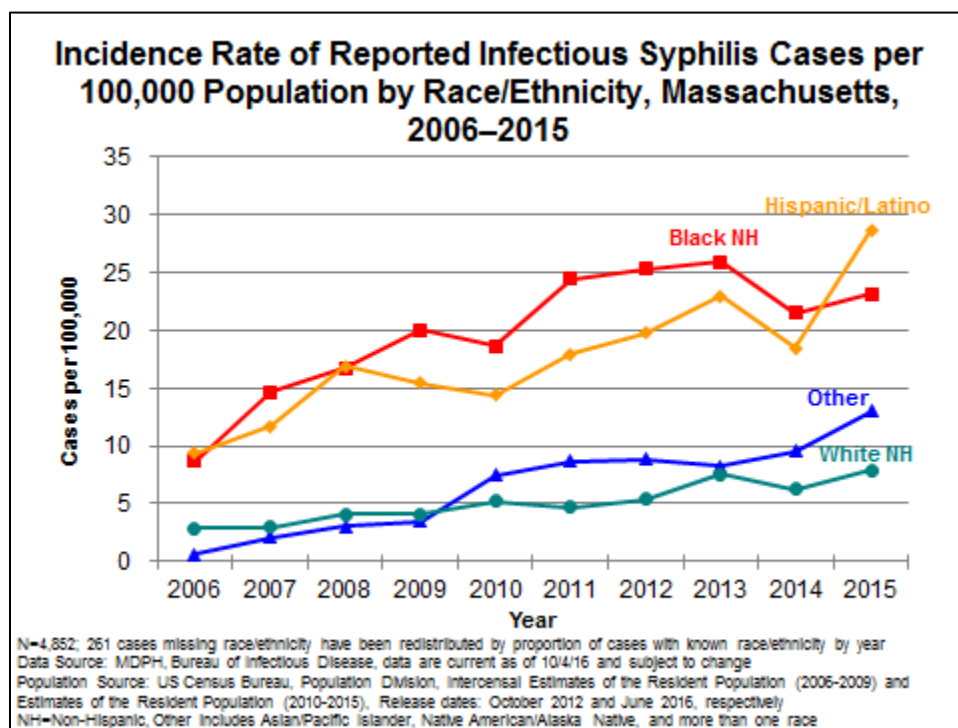
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### SYPHILIS



- In 2015, the infectious syphilis rate was highest among individuals aged 20 to 24 years, closely followed by individuals 25 to 29 years, and 30 to 39 years.
- In 2015, the infectious syphilis incidence rates among individuals aged 20 to 24 years, 25 to 29 years, and 30 to 39 years were all approximately double the overall statewide incidence rate in all ages (28.3, 25.7, and 24.5, respectively, compared to 11.7 per 100,000).

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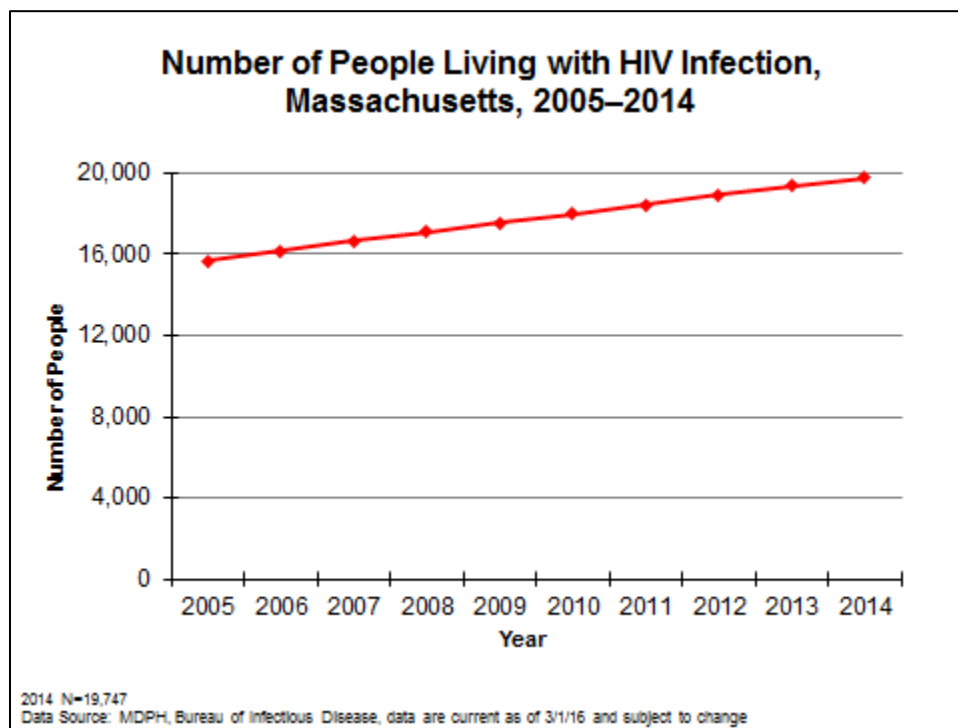
- In 2015, the infectious syphilis incidence rate was four times higher in the Hispanic/Latino population (28.7 cases per 100,000) and three times higher in the black (non-Hispanic) population (23.1 cases per 100,000) compared to the white (non-Hispanic) population (7.8 cases per 100,000).

Additional information about infectious syphilis is available online at [www.mass.gov/dph/cdc/std](http://www.mass.gov/dph/cdc/std).

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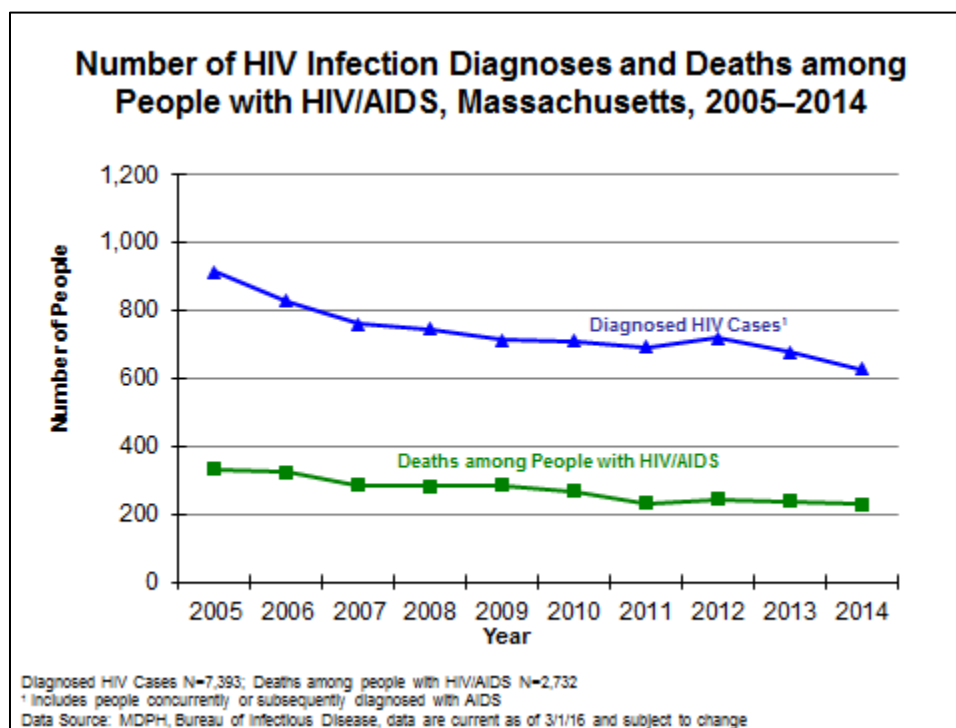
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### HIV/AIDS



- The number of people known to be living with HIV infection in Massachusetts increased by 26% from 15,666 on December 31, 2005 to 19,747 on December 31, 2014.

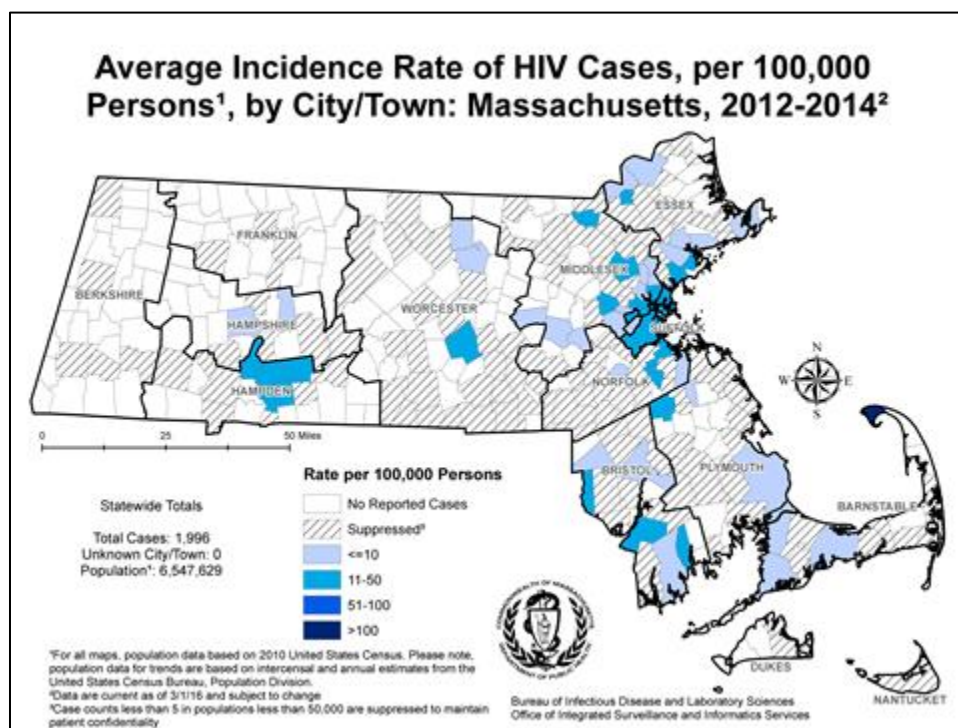
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- In 2014, there were 629 HIV infections diagnosed and 231 deaths among people reported with HIV infection in Massachusetts.
- The number of HIV infection diagnoses decreased by 31% from 2005 (N=913) to 2014 (N=629).
- The number of deaths among people reported with HIV/AIDS also decreased by 31% from 333 in 2005 to a new low of 231 deaths in 2014.



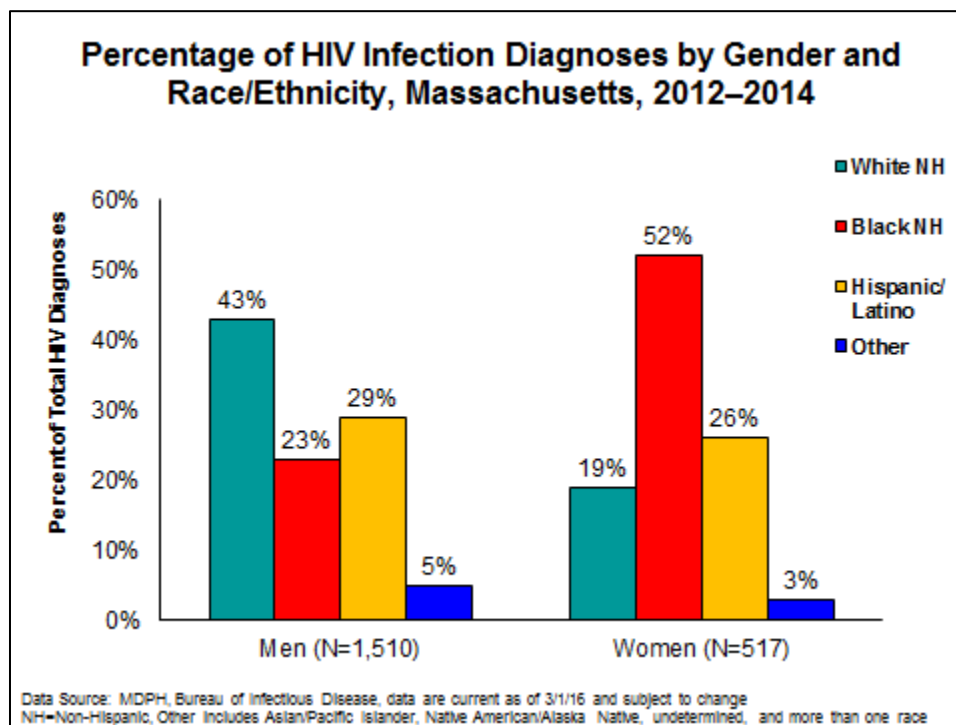
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- Of the 351 cities and towns in Massachusetts, 195 (56%) had at least one reported HIV infection diagnosis from 2012 to 2014.
- The majority of HIV infection diagnoses were reported in people living in large urban areas.
- Of those cities and towns where HIV infections were diagnosed within the three-year period 2012 to 2014, the majority (77%) had rates under ten per 100,000 population.
- Provincetown was the only locality with a rate of over 100 per 100,000 during this time period.
- Other areas of higher incidence rates were clustered in and around major cities such as Boston, Worcester, and Springfield.

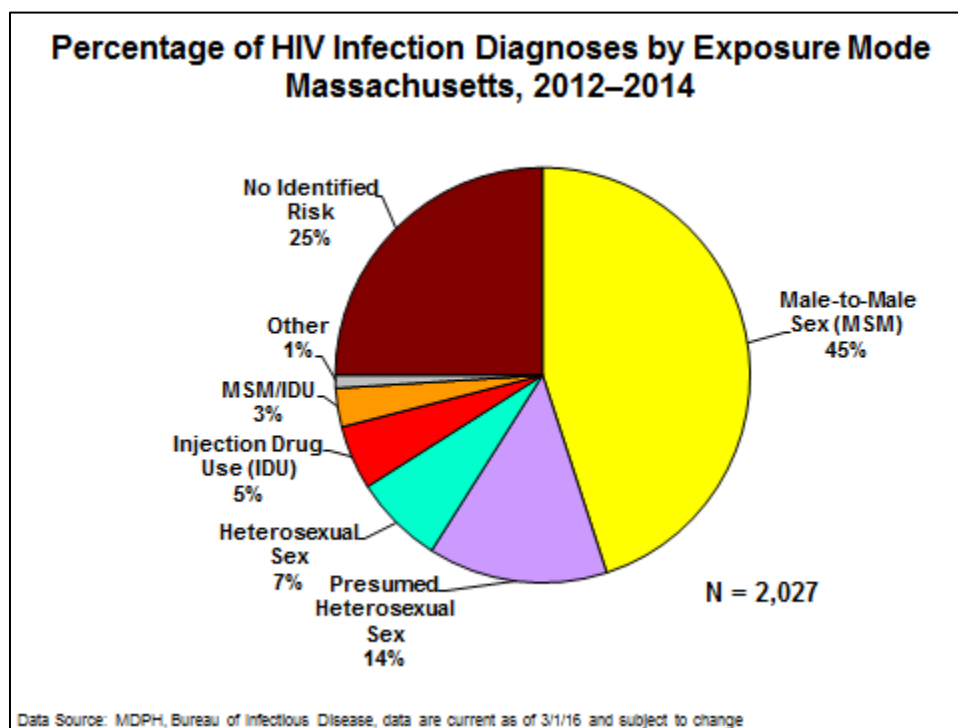
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## HIV/AIDS



- From 2012 to 2014, of the 2,027 HIV infections newly diagnosed in Massachusetts, 1,510 (74%) were in men and 517 (26%) were in women.
- Among men, the largest proportion of newly diagnosed HIV infections were in white (non-Hispanic) men, whereas among women the majority of newly diagnosed HIV infections were in black (non-Hispanic) women.
- With age-adjusted average annual rates of HIV diagnosis during 2012 to 2014 of 48.5 and 31.3 cases per 100,000 population, black (non-Hispanic) and Hispanic/Latino individuals were diagnosed at rates 10 and 7 times that of white (non-Hispanic) individuals (4.8 per 100,000), respectively.
  - Among women, the level of disparity was more pronounced: the age-adjusted average annual rate of HIV diagnosis during 2012 to 2014 among black (non-Hispanic) women (40.9 per 100,000) was 33 times, and among Hispanic/Latina women (15.2 per 100,000) was 12 times that of white (non-Hispanic) women (1.2 per 100,000).

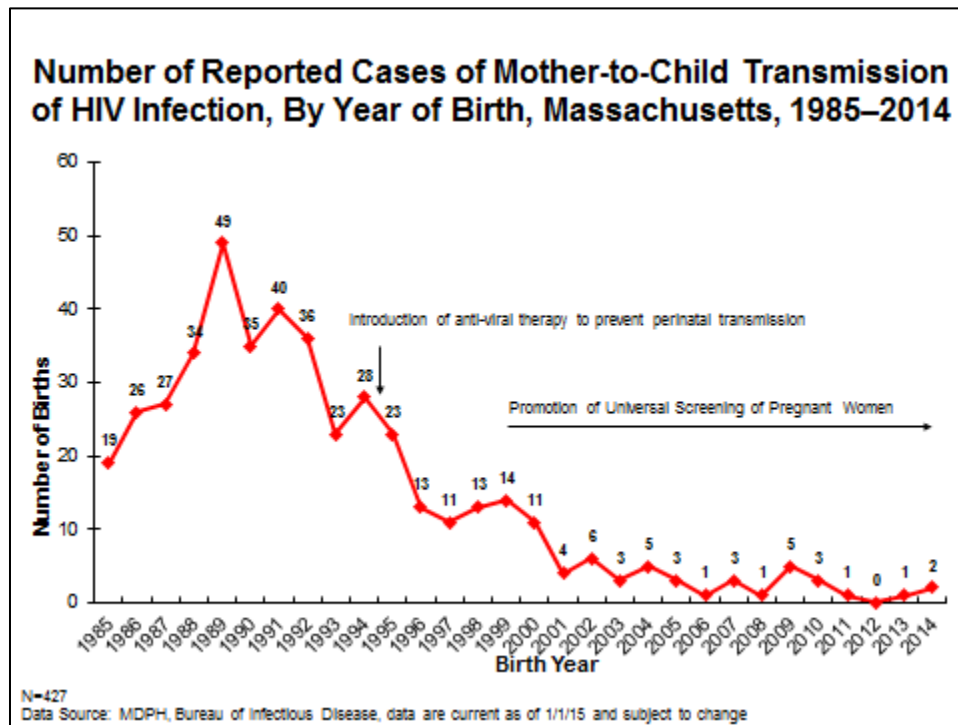
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- From 2012 to 2014, the primary risk reported for newly diagnosed HIV infection in Massachusetts was male-to-male sex (45%). A significant proportion of diagnoses were reported with No Identified Risk (25%).<sup>3</sup>

<sup>3</sup> The category of presumed heterosexual is used exclusively for women, to define HIV exposure mode in cases when sex with men is the only reported risk factor for HIV infection.

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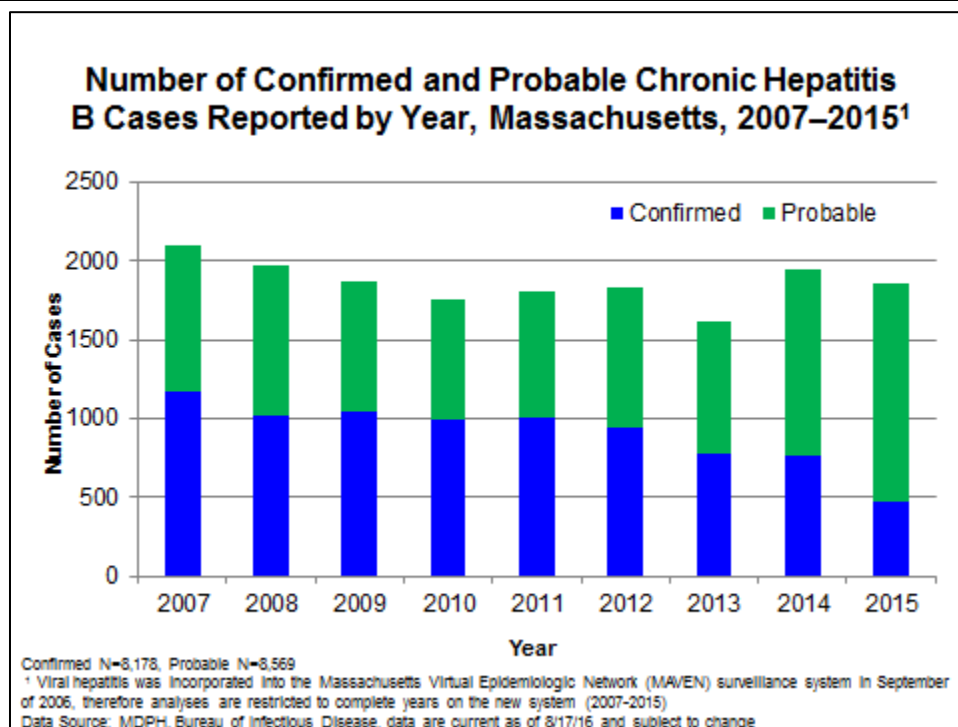


- Since the mid-1990's, Massachusetts has experienced a dramatic reduction in mother-to-child transmission of HIV infection due to high rates of antiretroviral treatment in HIV+ women, and progress in HIV screening during pregnancy.
- From 2005 to 2014, the number of HIV-infected newborns remained between zero and five cases annually, with two cases identified in 2014.

Additional information about HIV/AIDS is available online through the MDPH HIV/AIDS Epidemiologic Profile at [www.mass.gov/dph/cdc/aids](http://www.mass.gov/dph/cdc/aids).

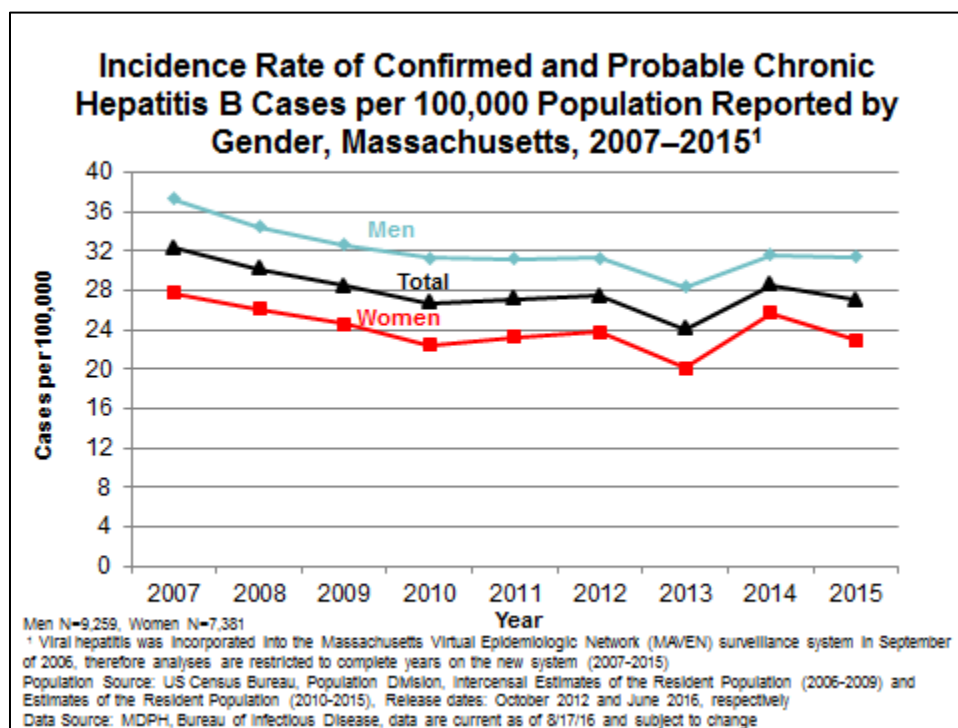
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## VIRAL HEPATITIS – HEPATITIS B



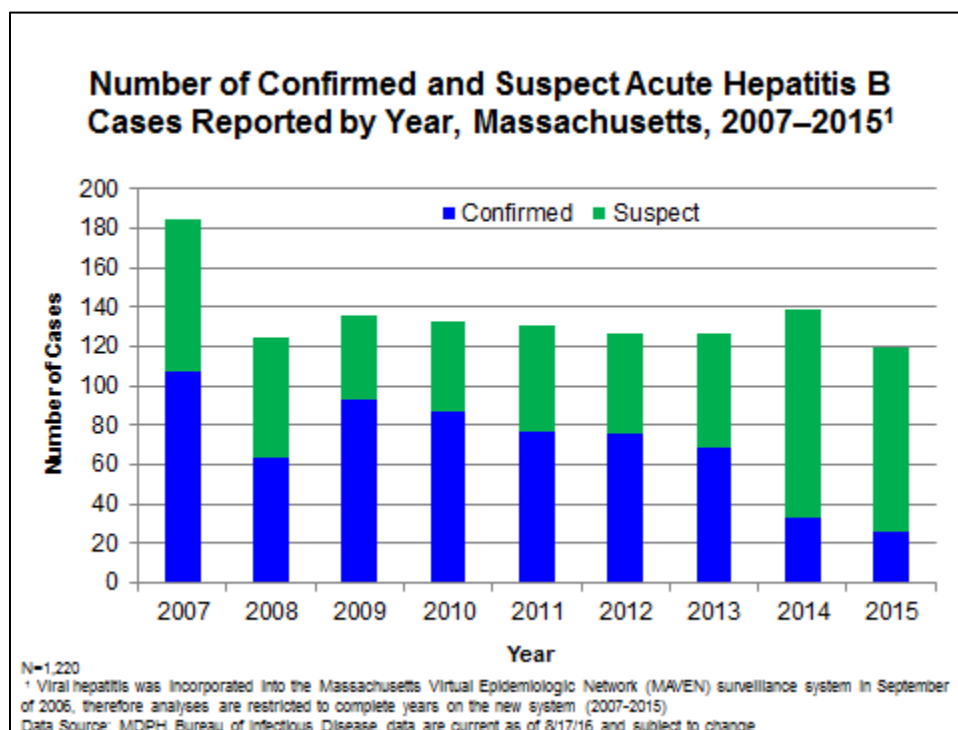
- In 2015, 471 confirmed chronic hepatitis B virus (HBV) cases were reported. An additional 1,380 probable HBV cases were reported for a total of 1,851 confirmed and probable HBV cases.

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- The incidence rate of confirmed and probable chronic HBV cases among men decreased from 37.3 per 100,000 in 2007 to 31.4 per 100,000 in 2015. The chronic HBV incidence rate among women decreased from 27.7 per 100,000 in 2007 to 22.9 per 100,000 in 2015.

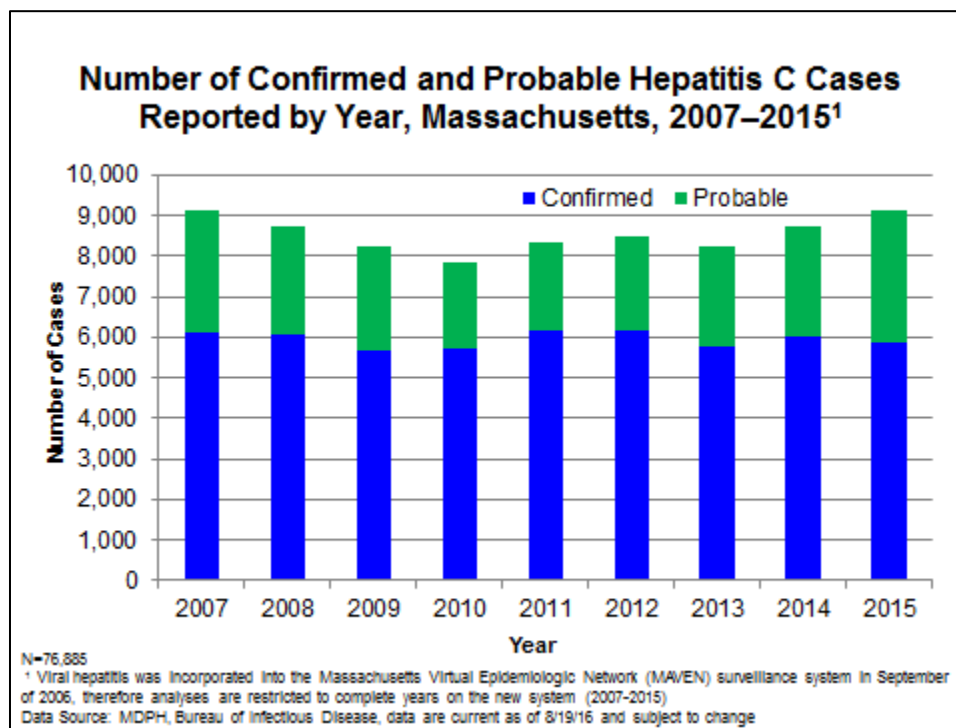
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- In 2015, there were 26 confirmed acute and 93 suspect acute HBV cases for a total of 119 acute cases.

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## VIRAL HEPATITIS - HEPATITIS C



- The annual number of confirmed and probable hepatitis C cases reported in Massachusetts since 2007 remained high with about 8,000 to 9,000 probable and confirmed cases reported each year.
- There were 5,845 confirmed and 3,267 probable hepatitis C cases reported to MDPH in 2015, for a total of 9,112.

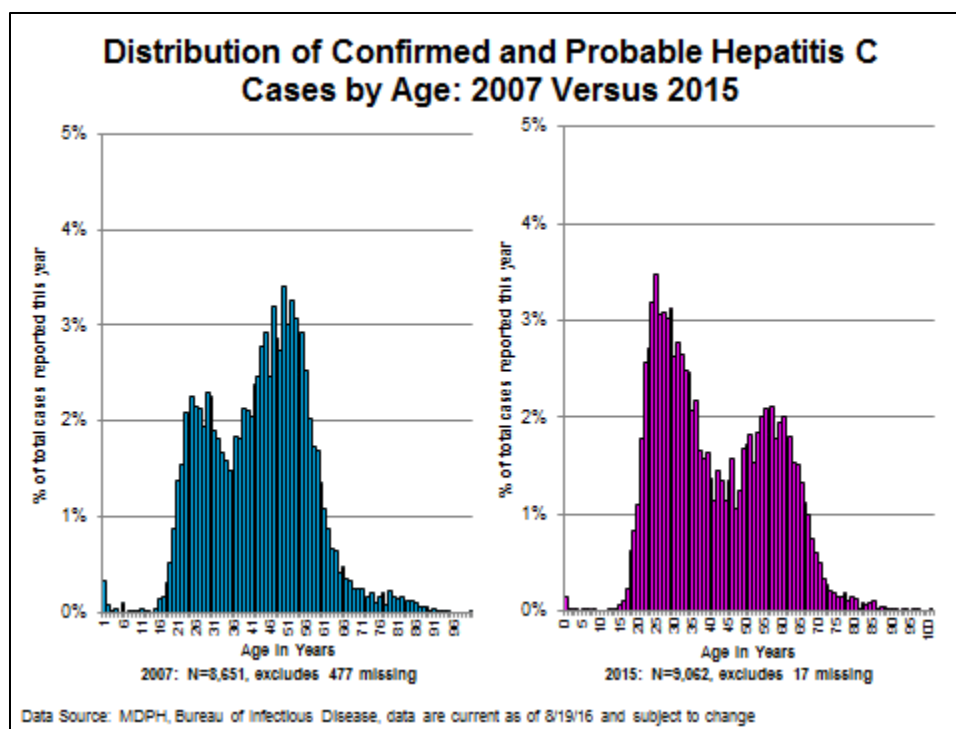


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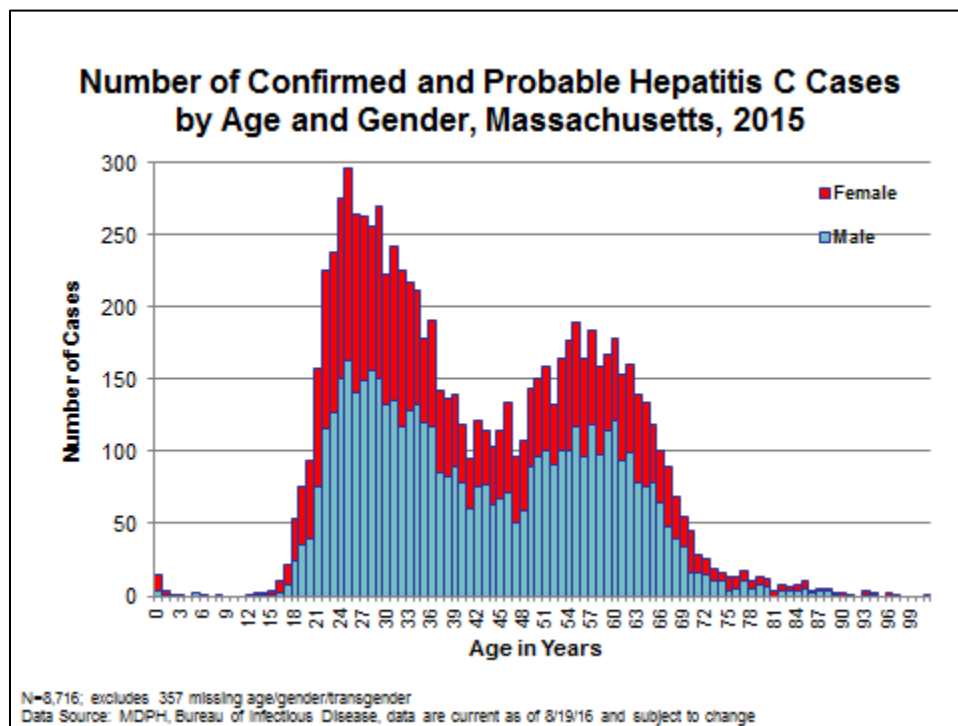
### VIRAL HEPATITIS - HEPATITIS C

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- In 2007, reported cases of hepatitis C were distributed in a curve with two age peaks, with the lower peak at age 28 years and the higher peak at age 49 years.
- In 2015, the reported cases were again distributed in a bi-modal curve, but with the higher peak at age 25 years and the lower peak at age 57 years.

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- Fifty-three percent of confirmed and probable hepatitis C cases less than 30 years of age were men, and 47% were women.
- The majority of new hepatitis C infections in persons less than 30 years of age were attributable to blood exposure in the context of injection drug use.
- Sixty percent of confirmed and probable hepatitis C cases 30 years of age and older were men, and 40% were women.

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### Strengths and Limitations of Data

	HIV/AIDS Case Data	STD Case Data	Viral Hepatitis Case Data
<b>Description</b>	<ul style="list-style-type: none"> <li>Collected by MDPH Bureau of Infectious Disease and Laboratory Sciences</li> <li>Reportable statewide.</li> <li>All laboratories and healthcare providers are required by law to report.</li> </ul>		
	<ul style="list-style-type: none"> <li>Includes individuals first diagnosed with HIV infection in MA.</li> </ul>	<ul style="list-style-type: none"> <li>Includes individuals first reported as living in MA.</li> </ul>	<ul style="list-style-type: none"> <li>Includes individuals first reported as living in MA.</li> </ul>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>Completeness of race/ethnicity data is high.</li> <li>All clinical laboratories in MA report electronically resulting in more complete and timely reporting of disease.</li> <li>Data are estimated to be 99% complete.</li> </ul>	<ul style="list-style-type: none"> <li>All clinical laboratories in MA report electronically resulting in more complete and timely reporting of disease.</li> <li>Most infectious syphilis cases agree to interview, resulting in reasonably complete race/ethnicity and sex of sex partner data.</li> </ul>	<ul style="list-style-type: none"> <li>All clinical laboratories in MA report electronically resulting in more complete and timely reporting of disease.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>Due to extensive follow up conducted to verify accurate date of diagnosis, annual incidence data are released a year after the close of the year. For example, 2016 HIV diagnoses through December 31, 2016 will be released on January 1, 2018.</li> </ul>	<ul style="list-style-type: none"> <li>Race/ethnicity data are incomplete for gonorrhea and chlamydia cases.</li> <li>Sex of sex partner is not routinely collected for gonorrhea and chlamydia cases.</li> <li>Bias is introduced for some STDs, such as chlamydia infection, where screening of asymptomatic persons occurs more frequently in women than in men.</li> </ul>	<ul style="list-style-type: none"> <li>Race/ethnicity data are incomplete.</li> <li>Risk history data are not collected on chronic HBV cases.</li> </ul>

# 2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report Massachusetts Department of Public Health

## Interpreting HIV/AIDS, STD, and Viral Hepatitis Data

Hepatitis B surveillance data reported are current as of August 17, 2016, hepatitis C data are as of August 19, 2016, HIV/AIDS data are as of March 1, 2016 and STD data are as of October 4, 2016. All data are subject to change.

### I. HIV/AIDS Exposure Mode Definitions

The HIV/AIDS exposure mode indicates the most probable risk behavior associated with HIV infection. Assignment of exposure mode is done in accordance with Centers for Disease Control and Prevention (CDC) guidelines when multiple exposure modes are reported. Following is a description of the exposure mode categories:

- **MSM (Male to Male Sex):** Includes males who report sexual contact with other males, and males who report sexual contact with both males and females. Please note the acronym MSM is also used to refer to “men who have sex with men”.
- **IDU (Injection Drug Use):** Cases in persons who report injection drug use.
- **MSM/IDU:** Cases in males who report both injection drug use and sexual contact with other males.
- **Heterosexual Sex:** Cases in persons who report specific heterosexual sex with a person with, or at increased risk for, HIV infection (e.g. an injection drug user). The sub-categories for this mode of transmission are listed below.
  - *Heterosexual Sex w/ an Injection Drug User*
  - *Heterosexual Sex w/ a person w/ HIV infection or AIDS*
  - *Heterosexual Sex w/ Bisexual male*
  - *Other Heterosexual Sex: Includes all other sub-categories of risk, such as heterosexual contact with a person infected through a blood transfusion.*
- **Presumed Heterosexual:** Cases among females who report heterosexual sex but do not report any other personal risk or any knowledge of specific risk in their male sex partners. As of January 1, 2011, males who were previously grouped in this category are categorized as No Identified Risk. Presumed heterosexual is an exposure mode category used by the Massachusetts HIV/AIDS Surveillance Program. The CDC categorizes these cases as No Identified Risk.
- **Pediatric:** Infection before the age of 13 years, including mother to child transmission through pregnancy, childbirth or breastfeeding and blood transfusions to children.
- **NIR (No Identified Risk):** Cases in persons with no reported history of exposure to HIV through any of the listed exposure categories. Follow-up is conducted to determine risk for those cases that are initially reported without a risk identified. Includes cases among males who were previously categorized in Massachusetts as Presumed Heterosexual.

### II. References to Newly Diagnosed HIV Infections

Due to the extensive follow up required to verify accurate date of diagnosis, all HIV/AIDS data reflect HIV infections diagnosed through 2014. Newly diagnosed HIV infections/cases include all persons diagnosed with HIV from 2012 to 2014, including those who were concurrently or subsequently diagnosed with AIDS. All HIV data are presented by the year of diagnosis, not the year of report.

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### **III. Race/Ethnicity of STD and HIV/AIDS Cases**

Race/ethnicity references to white residents and black residents represent persons who are white non-Hispanic and black non-Hispanic, respectively. All references to Hispanic/Latino for race/ethnicity represent persons of Hispanic/Latino heritage regardless of race.

### **IV. STD Case Reports and Analyses**

All information on STD cases reflect year of report and all incidence calculations represent crude rates. The source of denominators for calculating rate trends was: Intercensal Estimates of the Resident Population by Sex and Age for Massachusetts: April 1, 2000 to July 1, 2010 (ST-EST00INT-02-25); Source: U.S. Census Bureau, Population Division; Release Date: October 2012 and Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States, States, and Counties: April 1, 2010 to July 1, 2015, Source: U.S. Census Bureau, Population Division; Release Date: June 2016. The source of denominators for calculating rate maps was the 2010 US Census. The distribution of STD cases in incidence rate calculations with unknown values for race/ethnicity has changed compared to previous reports. Cases with unknown values are now redistributed proportionally based on the distribution of cases with known values. Due to this change, STD incidence rates by race/ethnicity are slightly higher for all years than previously reported.

### **V. Cell suppression methodology:**

Values less than five are suppressed for denominator populations less than 50,000 or for unknown values. Additional values may be suppressed to prevent back calculation.

## **2015 Integrated HIV/AIDS, STD, and Viral Hepatitis Surveillance Report Massachusetts Department of Public Health**

### **HIV/AIDS, STD, and Viral Hepatitis Case Classifications (in the time period of the data in this report)**

#### **HIV INFECTION**

Clinical description: HIV (human immunodeficiency virus) is a retrovirus with two serologically and geographically distinct species: HIV-1 and HIV-2. It is spread via person-to-person transmission through: sexual contact, the use of HIV-contaminated needles and syringes, vertical transmission from mother to infant, or the transfusion of contaminated blood or its components. HIV attacks the body's immune system, making the person more likely to get infections or infection-related cancers. These opportunistic infections or cancers take advantage of the weakened immune system and signal that the person has AIDS (acquired immunodeficiency syndrome), the advanced stage of HIV infection.

#### Case Classification

Confirmed: Positive HIV-1, Positive HIV-2, or Positive (Undifferentiated) HIV result from a differentiating immunoassay, Western Blot, IFA, or culture; Positive/Detected Qualitative HIV NAT (DNA or RNA); Quantitative HIV NAT (detectable viral load assay) or physician verified diagnosis.

#### **STD**

##### ***Chlamydia trachomatis*, Infection (Revised 6/09)**

Clinical description: Infection with *Chlamydia trachomatis* may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted; however, the infection is often asymptomatic in women. Perinatal infections may result in inclusion conjunctivitis and pneumonia in newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum (see Lymphogranuloma Venereum) and trachoma.

#### Laboratory criteria for diagnosis

- Isolation of *C. trachomatis* by culture or
- Demonstration of *C. trachomatis* in a clinical specimen by detection of antigen or nucleic acid

#### Case classification

Confirmed: a case that is laboratory confirmed

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### Gonorrhea (effective January 1, 2014)

Clinical description: A sexually transmitted infection commonly manifested by urethritis, cervicitis, proctitis, salpingitis, or pharyngitis. Infection may be asymptomatic.

#### Laboratory Criteria for Diagnosis

- Observation of gram-negative intracellular diplococci in a urethral smear obtained from a male or an endocervical smear obtained from a female, or
- Isolation of typical gram-negative, oxidase-positive diplococci by culture (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, or
- Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid

#### Case Classification

Probable: demonstration of gram-negative intracellular diplococci in a urethral smear obtained from a male or an endocervical smear obtained from a female.

Confirmed: a person with laboratory isolation of typical gram-negative, oxidase-positive diplococci by culture (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, or demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or detection of nucleic acid via nucleic acid amplification (e.g., PCR) or hybridization with a nucleic acid probe.

### Syphilis (effective Jan 1, 2014)

Syphilis is a complex sexually transmitted infection that has a highly variable clinical course. Adherence to the following surveillance case definitions will facilitate understanding the epidemiology of this disease across the U.S.

#### Syphilis, primary

Clinical description: A stage of infection with *Treponema pallidum* characterized by one or more ulcerative lesions (e.g. chancre), which might differ considerably in clinical appearance.

#### Laboratory criteria for diagnosis:

Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular methods.

#### Case classification

Probable: a case that meets the clinical description of primary syphilis with a reactive serologic test (nontreponemal: Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods; treponemal: fluorescent treponemal antibody absorbed [FTA-ABS], *T. pallidum* particle agglutination [TP-PA], enzyme immunoassay [EIA], chemiluminescence immunoassay [CIA], or equivalent serologic methods).<sup>4</sup>

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<sup>4</sup> These treponemal tests supersede older testing technologies, including microhemagglutination assay for antibody to *T. pallidum* [MHA-TP].

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Confirmed: a case that meets the clinical description of primary syphilis that is laboratory confirmed

### **Syphilis, secondary**

Clinical description: A stage of infection caused by *T. pallidum* characterized by localized or diffuse mucocutaneous lesions (e.g., rash — such as non-pruritic macular, maculopapular, papular, or pustular lesions), often with generalized lymphadenopathy. Other symptoms can include mucous patches, condyloma lata, and alopecia. The primary ulcerative lesion may still be present. Because of the wide array of symptoms possibly indicating secondary syphilis, serologic tests for syphilis and a thorough sexual history and physical examination are crucial to determining if a case should be classified as secondary syphilis.

Laboratory criteria for diagnosis:

- Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular methods

Case classification

Probable: a case that meets the clinical description of secondary syphilis with a nontreponemal (VDRL, RPR, or equivalent serologic methods) titer  $\geq 4$  AND a reactive treponemal test (FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods).

Confirmed: a case that meets the clinical description of secondary syphilis (with at least one sign or symptom) that is laboratory confirmed.

### **Syphilis, early latent**

Clinical description: A subcategory of latent syphilis (a stage of infection caused by *T. pallidum* in which organisms persist in the body of the infected person without causing symptoms or signs) when initial infection has occurred within the previous 12 months.

Case classification

Probable: A person with no clinical signs or symptoms of syphilis who has one of the following:

No past diagnosis of syphilis, AND a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), AND a reactive treponemal test (e.g., FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods),

**OR**

A current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer.



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### **AND**

Evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria:

- Documented seroconversion or fourfold or greater increase in titer of a nontreponemal test during the previous 12 months
- Documented seroconversion of a treponemal test during the previous 12 months
- A history of symptoms consistent with primary or secondary syphilis during the previous 12 months
- A history of sexual exposure to a partner within the previous 12 months who had primary, secondary, or early latent syphilis (documented independently as duration < 12 months)
- Only sexual contact was within the last 12 months (sexual debut)

There is no confirmed case classification for early latent syphilis.

### **Viral Hepatitis**

Hepatitis is inflammation of the liver. It can impair vital liver functions such as processing nutrients, filtering the blood and fighting infection. Viral hepatitis is inflammation of the liver caused by infection with a virus. In Massachusetts, the most common types of viral hepatitis are hepatitis A, hepatitis B and hepatitis C. Hepatitis can also result from heavy alcohol use, toxins, some medications, and certain medical conditions.

#### **Chronic HBV**

*Confirmed:*

IgM antibodies to hepatitis B core antigen (IgM anti-HBc) negative

### **AND**

A positive result on one of the following tests: hepatitis B surface antigen (HBsAg), hepatitis B e antigen (HBeAg), or nucleic acid test for hepatitis B virus DNA (including qualitative, quantitative and genotype testing),

### **OR**

HBsAg positive or nucleic acid test for hepatitis B virus DNA (including qualitative, quantitative and genotype testing), or HBeAg positive two times at least 6 months apart (Any combination of these tests performed 6 months apart is acceptable.)

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### *Probable:*

A case with a single HBsAg positive or HBV DNA positive (including qualitative, quantitative and genotype testing), or HBeAg positive lab result when no IgM anti-HBc results are available

### **Acute HBV infection**

Clinical Presentation: An acute illness with a discrete onset of symptoms consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain) and either a) jaundice or b) elevated serum alanine aminotransferase levels > 100 IU/L

### *Confirmed:*

Clinically compatible case\* not known to have chronic hepatitis B and

HBsAg positive

**AND**

IgM antibody to hepatitis B core antigen (IgM anti- HBc) positive, if done \*

A documented negative hepatitis B surface antigen (HBsAg) laboratory test result within 6 months prior to a positive test (either HBsAg, Hepatitis B “e” antigen (HBeAg), or hepatitis B virus nucleic acid testing (HBV NAT) including genotype) result does NOT require an acute clinical presentation to meet the surveillance case definition.

### *Suspect:*

Positive IgM antibody to hepatitis B core antigen (IgM anti-HBc) that does not meet the clinical definition

Note that the year into which a case is categorized is based upon the case’s “Event Date”, which is assigned by the following case characteristics, in decreasing order of specificity, dependent on availability of information: symptom onset date, specimen collection date, diagnosis date, or case report date

### **Past or Present HCV Infection Newly Reported to MDPH**

#### *Confirmed:*

One or more of the following criteria (except in persons less than 18 months of age, for whom only criteria 3 would meet the case classification criteria):

Antibodies to hepatitis C virus (anti-HCV) screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC

**OR**

Hepatitis C Virus Recombinant Immunoblot Assay (HCV RIBA) positive

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### OR

Nucleic Acid Test (NAT) for HCV RNA positive (including qualitative, quantitative, or genotype)

*Probable:*

Rapid HCV antibody positive test

### OR

Anti-HCV screening-test-positive that has not been verified by a more specific assay or has unknown signal to cut-off ratio (regardless of ALT results and acute hepatitis C status)

### Acute HCV Infection

*Confirmed:*

Clinically compatible presentation\* not known to have chronic HCV with 1 or more of the following:

Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC

### OR

HCV RIBA positive

### OR

NAT for HCV RNA positive (including qualitative, quantitative, or genotype)

### AND

if done meets the following two criteria<sup>†</sup>:

IgM anti-HAV negative AND  
IgM anti-HBV negative

\* - A documented negative HCV antibody laboratory result followed within 6 months by a positive test result (as described above) does NOT require an acute clinical presentation to meet the confirmed case definition

† - From 2007-2013, cases meeting the acute case definition but missing a negative HAV & HBV result were classified as *Suspect*. The case definition change in 2013 eliminated this requirement.

*Suspect:*

A documented negative HCV antibody laboratory test result followed within 6-12 months by a positive test result (as described above) does NOT require an acute clinical presentation to meet the suspect case definition.

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Low level viremia (<100,000 IU/mL) not known to have chronic HCV

Note that the year into which a case is categorized is based upon the case's "Event Date", which is assigned by the following case characteristics, in decreasing order of specificity, dependent on availability of information: symptom onset date, specimen collection date, diagnosis date, or case report date.

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### HIV/AIDS, STD and Viral Hepatitis Program Staff Contact Information

Topic	Contact	E-Mail	Phone
<b>Division of STD Prevention &amp; HIV/AIDS Surveillance, and Ratelle STD/HIV Prevention Training Center</b>			
Policy Development and Administration	Kathleen Roosevelt (Director, STD Prevention Division)	<a href="mailto:Kathleen.roosevelt@state.ma.us">Kathleen.roosevelt@state.ma.us</a>	617-983-6941
Sylvie Ratelle STD/HIV Prevention Training Center	Katherine Hsu (Medical Director) Janine Dyer (Deputy Director)	<a href="mailto:Katherine.Hsu@state.ma.us">Katherine.Hsu@state.ma.us</a> <a href="mailto:Janine.Dyer@state.ma.us">Janine.Dyer@state.ma.us</a>	617-983-6948 617-983-6964
STD/HIV/AIDS Surveillance and Epidemiology	Betsey John (Director, HIV/AIDS and STD Surveillance)	<a href="mailto:Betsey.John@state.ma.us">Betsey.John@state.ma.us</a>	617-983-6570
STD Clinical Services	Katherine Hsu (Medical Director) Barbara Coughlin (Public Health Nurse)	<a href="mailto:Katherine.Hsu@state.ma.us">Katherine.Hsu@state.ma.us</a> <a href="mailto:Barbara.Coughlin@state.ma.us">Barbara.Coughlin@state.ma.us</a>	617-983-6948 413-586-7525
STD Disease Intervention Field Services and STD Partner Notification	David Goudreau (Field Operations Manager) Christopher Borger (Field Operations Manager)	<a href="mailto:David.Goudreau@state.ma.us">David.Goudreau@state.ma.us</a> <a href="mailto:Chris.Borger@state.ma.us">Chris.Borger@state.ma.us</a>	617-983-6835 617-983-6930
STD Health Education, Training, and Prevention	Brenda Hernandez (Special Projects Coordinator)	<a href="mailto:Brenda.Hernandez@state.ma.us">Brenda.Hernandez@state.ma.us</a>	617-983-6943
<b>Office of HIV/AIDS</b>			
HIV/AIDS Resource Allocation, Policy, and Programs	Dawn Fukuda (Director, Office of HIV/AIDS)	<a href="mailto:Dawn.Fukuda@state.ma.us">Dawn.Fukuda@state.ma.us</a>	617-624-5303
Health Promotion and Disease Prevention Services	Linda Goldman, (Director of Health Promotion and Disease Prevention)	<a href="mailto:Linda.Goldman@state.ma.us">Linda.Goldman@state.ma.us</a>	617-624-5347
Behavioral Health and Community Engagement	Barry Callis (Director of Behavioral Health and Infectious Disease Prevention)	<a href="mailto:Barry.Callis@state.ma.us">Barry.Callis@state.ma.us</a>	617-624-5316
<b>Viral Hepatitis Program</b>			
Viral Hepatitis Surveillance and Epidemiology	Shauna Onofrey (Viral Hepatitis Surveillance Coordinator)	<a href="mailto:Shauna.Onofrey@state.ma.us">Shauna.Onofrey@state.ma.us</a>	617-983-6776
	Susan Soliva (Epidemiologist)	<a href="mailto:Susan.Soliva@state.ma.us">Susan.Soliva@state.ma.us</a>	617-983-6883

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## HIV/AIDS, STD, and Viral Hepatitis Resources

### Training

Professional training to community based organizations, local public health departments, and medical providers can be requested and is free of charge.

Type of Training	Contact Information and Website
STD Education, STD Partner Notification, and STD Reporting	617-983-6940 <a href="http://www.mass.gov/dph/cdc/std">www.mass.gov/dph/cdc/std</a>
HIV/AIDS Reporting and Surveillance Projects	617-983-6560 <a href="http://www.mass.gov/dph/cdc/aids">www.mass.gov/dph/cdc/aids</a>
HIV/AIDS Provider Trainings	617-624-5338 <a href="http://www.mass.gov/dph/aids">www.mass.gov/dph/aids</a>
Viral Hepatitis Education	617-983-6800 <a href="http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/hepatitis/hepatitis-c/viral-hepatitis-educational-materials.html">http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/hepatitis/hepatitis-c/viral-hepatitis-educational-materials.html</a>
STD Diagnosis, Treatment, and Management	617-983-6945 <a href="http://www.RatellePTC.org">www.RatellePTC.org</a>

### Material and Clinical Toolkits

Health education materials and clinical toolkits can be requested free of charge.

Type of Material	Contact Information and Website
STD, HIV, Viral Hepatitis Fact Sheets	617-983-6940 <a href="http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/factsheets.html#std">http://www.mass.gov/eohhs/gov/departments/dph/programs/id/epidemiology/factsheets.html#std</a>
HIV/AIDS Reporting for Health Care Providers Brochure	617-983-6560 <a href="http://www.mass.gov/eohhs/gov/departments/dph/programs/id/hiv-aids/reporting/">http://www.mass.gov/eohhs/gov/departments/dph/programs/id/hiv-aids/reporting/</a>
STD, and HIV Posters and Brochures	617-983-6800 <a href="https://massclearinghouse.ehs.state.ma.us/">https://massclearinghouse.ehs.state.ma.us/</a>
STD Diagnosis, Treatment, and Management Toolkits	617-983-9645 <a href="http://www.RatellePTC.org">www.RatellePTC.org</a>

### MDPH and MDPH Funded Websites

Division of STD Prevention	<a href="http://www.mass.gov/dph/cdc/std">www.mass.gov/dph/cdc/std</a>
HIV/AIDS Bureau	<a href="http://www.mass.gov/dph/aids">www.mass.gov/dph/aids</a>
HIV/AIDS Surveillance	<a href="http://www.mass.gov/dph/cdc/aids">www.mass.gov/dph/cdc/aids</a>
Viral Hepatitis Program	<a href="http://www.mass.gov/hepc">www.mass.gov/hepc</a>
Sylvie Ratelle STD/HIV Prevention Training Center	<a href="http://www.RatellePTC.org">www.RatellePTC.org</a>

### National Websites

Center for Disease Control and Prevention	<a href="http://www.cdc.gov">www.cdc.gov</a>
Division of STD Prevention	<a href="http://www.cdc.gov/std">www.cdc.gov/std</a>
Division of HIV/AIDS Prevention	<a href="http://www.cdc.gov/hiv">www.cdc.gov/hiv</a>
Division of Viral Hepatitis	<a href="http://www.cdc.gov/hepatitis">www.cdc.gov/hepatitis</a>
National Network of STD/HIV Prevention Training Centers	<a href="http://www.nnptc.org">www.nnptc.org</a>
CDC funded viral hepatitis online training	<a href="http://depts.washington.edu/hepstudy/">http://depts.washington.edu/hepstudy/</a>